

**REMARKS****A. Status of the Claims and Explanation of the Amendments**

Prior to the submission of this paper, claims 1-101 were cancelled and claims 102-116 were pending. In this paper, claim 102 has been amended to include elements from claim 104. Both claims 103 and 104 have been cancelled without prejudice. New claim 117 has been added. Accordingly, the claims currently presented for examination are 102 and 105-117.

Support for new claim 117 can be found generally throughout the specification. See, e.g., Table 2 of the specification.

The Examiner has objected to claims 112 and 114 for certain informalities. Applicants have amended claims 112 and 114 so that specific mutants are defined by their SEQ ID NOs, as requested by the Examiner. Reconsideration and withdrawal of the objections are respectfully requested.

The Examiner has also rejected claims 103-110 under 35 U.S.C. §112, ¶2, for allegedly being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention. The Examiner alleges that the claims are indefinite because they recite specific mutations without providing a SEQ ID NO. In this paper, Applicants have amended claim 102 so that it recites SEQ ID NO: 2. Accordingly, because claims 103-110 depend directly or indirectly from claim 102, Applicants assert that these claims are not indefinite. Reconsideration and withdrawal of the rejection under 35 U.S.C. §112, ¶2 are respectfully requested.

Claims 102-107, 109, 111, 113, 115, and 116 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,625,048 to Tsien et al. ("Tsien").

B. Tsien Fails to Teach, Disclose or Suggest Applicants' Invention

Applicants respectfully traverse the rejection of claims 102-107, 109, 111, 113, 115, and 116 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,625,048 to Tsien. Briefly, Tsien fails to teach, disclose, or suggest all of the elements of Applicants' amended claims. Accordingly, the rejections should be withdrawn.

1. Tsien Fails to Disclose a Mutation and Position 202 Without a Corresponding Mutation at Position 203.

According to the Office Action, "Tsien et al. teach GFP mutants where positions 167, 202, and 203 have been mutated (Table 1). Tsien et al. specifically teach the I167V mutant. Fusion proteins are also taught (see columns 6 and claims). The GFP of Tsien et al. possess an Ile at position 161. Thus, the reference clearly anticipates the invention as recited in the claims."

In this paper, Applicants have amended independent claim 102 to recite, *inter alia*, "A nucleic acid molecule encoding a pH sensitive mutant of GFP of *Aequora victoria*... wherein no substitutions are made at amino acid position 203 relative to the sequence of said wild type GFP, when there is a substitution at amino acid position 202." Tsien, however, appears to refer to only a **combined** mutation occurring in mutant H9 of Ser 202 → Phe and Thr 203 → Ile. Applicants do not see where Tsien teaches, discloses, or suggests "no substitutions at position 203....when there is a substitution at amino acid position 202" Accordingly, Applicants respectfully assert that Tsien fails to teach, disclose, or suggest all of the claim elements of claim 102, or the claims that depend therefrom. Because not claim elements are taught, the rejection of claim 102 and corresponding dependent claims should be withdrawn. MPEP §2131.

Reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) are respectfully requested.

**CONCLUSION**

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

**AUTHORIZATION**

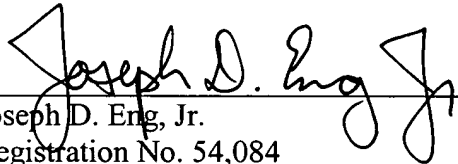
The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 2955-4004US3. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 2955-4004US3. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,  
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Dated: May 18, 2005

By: \_\_\_\_\_

  
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